METHOD AND SYSTEM FOR PERFORMING A LONGEST PREFIX MATCH SEARCH

ABSTRACT

A method and system for finding a longest prefix match for a key in a computer network is disclosed. The method and system include providing a main engine and providing an auxiliary engine. The main engine is for storing a first plurality of addresses and for searching the first plurality of addresses for the longest prefix match for the key. None of the first plurality of addresses is a prefix for another address of the first plurality of addresses. The auxiliary engine is for storing and searching a second plurality of addresses. A first address of the second plurality of addresses is capable of including the prefix for a second address of the first plurality of addresses or for a third address for the second plurality of addresses. None of the first plurality of addresses is the prefix for any of the second plurality of addresses. Each of the second plurality of addresses is distinct from each of the first plurality of addresses.